

1. (Currently Amended) A method of welding comprising:
positioning a monomer sealant ~~which is at least partially cured without substantial damage~~
~~by temperatures produced during friction stir welding between surfaces to be welded together; and~~
friction stir welding at least portions of the surfaces through the monomer to form a welded
joint and together to cure form the a sealant there adjacent the welded joint between the surfaces
by at least partially curing the monomer.

2-3. (Canceled)

4. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 wherein positioning the
monomer further comprises:
partially curing the monomer sealant ~~before welding the first and second surfaces together.~~

5. (Currently Amended) The invention of claim 4 wherein welding ~~the surfaces~~ further
comprises:
completing the curing of the monomer sealant.

6. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 wherein positioning the
monomer further comprises:
applying an adhesive monomer ~~to the surfaces to be welded.~~

7. (Canceled)

8. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 wherein positioning the
monomer further comprises:
applying an adhesive monomer ~~to the surfaces to be welded, and~~
partially curing the monomer sealant ~~before welding the surfaces together.~~

9. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 wherein welding to cure the
monomer ~~the surfaces together~~ further comprises:

~~forming a sealant layer between at least portions of surfaces being welded by polymerizing the monomer.~~

10. (Canceled)

11. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 further comprising: applying heat ~~to the first and second joint elements to cure the monomer sealant.~~

12. (Currently Amended) The invention of claim 11 wherein applying heat further comprises: applying laser energy ~~to the surfaces to be welded to cure the sealant.~~

13. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 wherein ~~the welding~~ further comprises ~~produces:~~
forming a lap joint or filleting.

14. (Currently Amended) The invention of ~~claim 3~~ claims 1 or 28 wherein positioning a monomer sealant further comprises:
applying an elastomeric ~~sealant~~ monomer.

15. (Currently Amended) The invention of claim 14 wherein positioning a monomer further comprises:
applying a fluoroelastomeric ~~sealant~~ monomer.

16-27. (Canceled)

28. (New) The invention of claim 1 further comprising:
selecting a monomer through which a welded joint can be formed by friction stir welding
without substantial degradation of the welded joint.